Appl. No.: 10/743,283

Amendment dated July 13, 2005

Reply to Office Action of February 8, 2005

Page 2 of 13

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A ball trajectory measuring apparatus comprising:

a first camera for photographing a flying ball from a back of the flying ball;

a second camera having an angle of view related to that of the first camera and

serving to photograph the back of the flying ball later than the first camera;

a third camera for photographing a front of the flying ball;

a control portion for controlling photographing timings of the first, second and third

cameras; and

a calculating portion for calculating position coordinates of the ball based on image

data obtained by the first, second and third cameras, and based on position coordinates,

directions of optical axes and angles of view of the respective cameras,

wherein the angle of view of the first camera partially overlaps with that of the

second camera, the angle of view of the second camera is related to that of the first camera

based on ball images which are simultaneously photographed by the first camera and the

second camera, and a correspondence of the coordinates in the angle of view of the first

camera to those in the angle of view of the second camera is grasped by the calculating

means portion.

2. (Previously Presented) The ball trajectory measuring apparatus according to

claim 1, wherein the first camera is positioned behind a ball launch point, the second

Appl. No.: 10/743,283

Amendment dated July 13, 2005

Reply to Office Action of February 8, 2005

Page 3 of 13

camera is positioned between the launch point and a drop point, and the third camera is

positioned after the drop point.

3. (Canceled)

4. (Currently Amended) A ball trajectory measuring apparatus comprising:

a first camera for photographing a front of a flying ball;

a second camera having an angle of view related to that of the first camera and

serving to photograph the front of the flying ball earlier than the first camera;

a third camera for photographing a back of the flying ball;

a control portion for controlling photographing timings of the first, second and third

cameras; and

a calculating portion for calculating position coordinates of the ball based on image

data obtained by the first, second and third cameras, and based on position coordinates,

directions of optical axes and angles of view of the respective cameras,

wherein the angle of view of the first camera partially overlaps with that of the

second camera, the angle of view of the second camera is related to that of the first camera

based on ball images which are simultaneously photographed by the first camera and the

second camera, and a correspondence of the coordinates in the angle of view of the first

camera to those in the angle of view of the second camera is grasped by the calculating

means portion.

Appl. No.: 10/743,283

Amendment dated July 13, 2005

Reply to Office Action of February 8, 2005

Page 4 of 13

5. (Previously Presented) The ball trajectory measuring apparatus according to

claim 4, wherein the first camera is positioned after a ball drop point, the second camera is

positioned between a launch point and the drop point, and the third camera is positioned

behind the launch point.

6. (Canceled)

7. (Currently Amended) A ball trajectory measuring apparatus comprising:

a first camera for photographing a flying ball from a back of the flying ball;

a second camera having an angle of view related to that of the first camera and

serving to photograph the back of the flying ball later than the first camera;

a third camera for photographing a front of the flying ball;

a control portion for controlling photographing timings of the first, second and third

cameras; and

a calculating portion for calculating position coordinates of the ball based on image

data obtained by the first, second and third cameras, and based on position coordinates,

directions of optical axes and angles of view of the respective cameras,

wherein the angle of view of the first camera partially overlaps with that of the second

camera, the angle of view of the second camera is related to that of the first camera based on

Appl. No.: 10/743,283

Amendment dated July 13, 2005

Reply to Office Action of February 8, 2005

Page 5 of 13

ball images which are simultaneously photographed by the first camera and the second

camera, and

wherein the first camera and the second camera are located at substantially the same

distance, [[and]] at substantially the same position elevation and directly behind the launch

point, said first and second cameras are inclined upward from a horizontal direction, and an

angle of inclination of said first camera is greater than an angle of inclination of said second

camera.

8. (Previously Presented) The ball trajectory measuring apparatus according to

claim 5, wherein said first and second cameras are inclined upward from a horizontal

direction, and an angle of inclination of said first camera is less than an angle of inclination of

said second camera.

9. (Previously Presented) The ball trajectory measuring apparatus according to

claim 1, wherein the flying ball is photographed by only said first and said third camera during

a first portion of the flight of the flying ball, said first, second and third cameras during a

second portion of the flight of the flying ball, and only said second and third cameras during a

third portion of the flight of the flying ball.

10. (Previously Presented) The ball trajectory measuring apparatus according to

claim 4, wherein the flying ball is photographed by only said third and said second camera

Appl. No.: 10/743,283

Amendment dated July 13, 2005

Reply to Office Action of February 8, 2005

Page 6 of 13

during a first portion of the flight of the flying ball, said first, second and third cameras during a

second portion of the flight of the flying ball, and only said first and third cameras during a third

portion of the flight of the flying ball.

11. (New) The ball trajectory measuring apparatus according to claim 7, wherein

a correspondence of the coordinates in the angle of view of the first camera to those in the

angle of view of the second camera is grasped by the calculating portion.

12. (New) The ball trajectory measuring apparatus according to claim 7, wherein

the flying ball is photographed by only said first and said third camera during a first portion of

the flight of the flying ball, said first, second and third cameras during a second portion of the

flight of the flying ball, and only said second and third cameras during a third portion of the

flight of the flying ball.